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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,160	08/30/2006	Koichi Okada	2006_1424A	6034

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EXAMINER	
LIGERAKIS, JOHN	
ART UNIT	PAPER NUMBER
4136	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,160	OKADA ET AL.	
	Examiner	Art Unit	
	John V. Ligerakis	4136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *8-15 and 19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 16-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 August 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/30/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species 2 in the reply filed on April 30, 2008 is acknowledged.

2. Claims 8-15 and 19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 30, 2008.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Variable Setting Unit, Control Unit. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 6, 21a, 25.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 3, 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al (US Patent 6,244,403).** Regarding Claims 1 and 5, Ito et al disclose a control system for a rotation transmission device (See Fig. 1), comprising a roller clutch unit (1) including an inner member (4), an outer ring (2) and rollers (10) as engaging elements disposed between said inner member (4) and said outer ring (2) for selectively transmitting torque of a rotary shaft, and an electromagnetic clutch unit (14) including an electromagnetic coil (16) for selectively engaging and disengaging said roller clutch unit (1) by electromagnetic force produced by said

electromagnetic coil (16); a variable setting unit [Col 4, Lines 6-12] for variably applying current to said electromagnetic coil (16) corresponding to the relative speed between said inner member (4) and said outer ring (2) when said roller clutch unit (1) engages; and a control unit [See Abstract, Line 5] for controlling said variable setting unit.

3. Regarding Claim 3, Ito et al disclose the device as set forth above, wherein after said roller clutch unit (1) has engaged, current is intermittently applied to said electromagnetic coil (16) according to said relative speed.

4. Regarding Claim 6, Ito et al discloses the system as set forth above, wherein said inner member (4) is mounted on said rotary shaft, wherein said outer ring (2) is coaxially and rotatably mounted around said inner member (4), wherein a plurality of cam surfaces (7) and a raceway are formed on one and the other of an outer periphery of said inner member (4)and an inner periphery (6) of said outer ring (2), respectively, wherein a retainer (8) is disposed between said outer periphery (7) and said inner periphery (6) and is formed with as many pockets (9) as said cam surfaces (7), wherein each of said rollers (10) is received in one of said pockets (9), wherein said electromagnetic clutch unit (14) comprises a rotor (18) mounted to the member formed with said raceway, an armature (21) provided on one side of said rotor (18), said electromagnetic coil (16) being provided on an opposite side of said rotor (18), an elastic member biasing said armature (21) and said rotor (18) away from each other, said armature (21) being rotationally fixed to but axially movable relative to said retainer (8), and wherein said retainer (8) and the member (4) formed with said cam surfaces (7) being joined together through a neutral position retaining member biasing said retainer (8) toward a neutral position where said roller clutch unit is not engaged by said rollers (10).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 2 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (US Patent 6,244,403).** Ito et al disclose the system as set forth above, wherein said variable setting unit applies a current necessary to keep the roller clutch engaged, wherein the variable setting unit is a relative to the speed of the engine. Though Ito et al do not specifically disclose an engagement factor n greater than 1, it would be obvious to one of ordinary skill in the art to use an engagement factor necessary to achieve the desired results.

Regarding Claim 16, Ito et al disclose the system as set forth above, wherein after said roller clutch unit (1) has engaged, current is intermittently applied to said electromagnetic coil (16) according to said relative speed.

7. Claims 4, 7 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito, et al (US Patent 6,244,403) in view of Ito et al (US Patent 6,035,988).

Regarding Claims 4, 7, 17, and 18, Ito, et al (US Patent 6,244,403) disclose the system as set forth above but does not disclose a switch for changeover between drive mode and heating mode. Ito et al (US Patent 6,035,988) disclose a control system for a rotation transmission device with a mode changeover switch wherein the electromagnetic coil is selectively changed over between drive and heating mode if the oil temperature is lower than a predetermined

temperature (Col 3, Lines 54-64). At the time of the invention, it would have been obvious for one of ordinary skill in the art to use the switch for changeover between drive mode and heating mode as set forth by Ito et al (US Patent 6,035,988) for use in the system as set forth by Ito et al (US Patent 6,244,403) to provide a means for controlling operation of the clutch under various environmental conditions.

Conclusion

The prior art made of record and not relied upon is considered pertinent to the applicants' disclosure. Muramatsu et al (PG Pub US 2004/0188214) shows a two-way clutch wherein the cage is elastically retained by elastic retaining means. Meudon et al US Patent 3,581,156) shows an electromagnetic clutch system for use in a motor vehicle which includes a transducer which supplied a speed voltage to a control circuit (See Fig 1). Yamada (US Patent 4,460,076) shows an electromagnetic spring clutch in which the mode of operation shows a linear relationship of Output vs. Revolutions. Gao (US Patent 5,348,126) shows a multifunctional energy-saving system for vehicles with a control mechanism. Engagement is controlled by the control mechanism to reduce energy consumption. Monahan et al (US Patent 6,481,548) shows a two-way clutch allowing limited torque containing an electromagnetic coil, wherein the actuation by the ECU can be controlled and modulated by limiting the current delivered or by pulse width modulation of the output signal. Handa et al (US Patent 6,698,563) shows a vehicular drive switching mechanism with a plurality of engaging/disengaging members with an inner and outer ring (See Fig. 2). Goto et al (US Patent 6,755,763) shows an electronically controlled roller clutch assembly with an ECU for selectively engaging and disengaging the clutch. Yasui et al

(US Patent 6,766,888) shows a rotation transmission provided which is used to selectively transmit power. A retainer is mounted between an inner member and an outer member, and is formed with a plurality of pockets containing engaging elements. Kirkwood et al (US Patent 6,808,052) shows a torque transfer mechanism for controlling the clutch engagement force containing a force amplification mechanism which amplifies the thrust force to defice the engagement force.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Ligerakis whose telephone number is (571) 270-3278. The examiner can normally be reached on M-Th 8am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. Allen Shriver can be reached on (571)272-6698. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9179 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000

/John V Ligerakis/

Examiner, Art Unit 4136

/J. Allen Shriver/
Supervisory Patent Examiner, Art Unit 4136